Puget Sound Action Team

GMA Update Recommendations for Local Governments in Puget Sound
May 2005 (Rev)

Areas of focus: The Puget Sound Action Team's (PSAT) recommendations include into comprehensive plans and ordinances opportunities to integrate stormwater management and protection of water quality, shellfish growing areas and nearshore habitat.

This document is available online with live links at http://www.psat.wa.gov/Programs/GMA/GMA.htm or go to our home page at www.psat.wa.gov and click on the icon for Growth in Puget Sound.

For PSAT assistance: The PSAT Local Liaison for your jurisdiction is listed at http://www.psat.wa.gov/About_Sound/County.htm or call 800-54-SOUND for contact information.

Contents include recommendations for the following land use documents:

- Comprehensive Plan
  - Urban Growth Boundaries
  - Limited Areas of More Intense Rural Development policies
  - Stormwater management policies
  - Subarea Plans
  - Clearing and grading policies
  - Resource Lands policies
  - Critical Areas policies
- Growth Management Ordinances and Regulations
  - Critical Areas Ordinance
  - Stormwater Ordinance
  - Agricultural Lands Ordinance
  - Zoning Code Regulations
  - Health Code

For state guidance on the integration of shorelines and critical areas regulations, please refer to *Questions and Answers under ESHB 1933: Critical areas protection under the Growth Management Act and Shoreline Management Act* by the Departments of Ecology and Community, Trade and Economic Development:
http://www.ecy.wa.gov/programs/sea/SMA/guidelines/index.html

Recommendations include references to supporting language in the Revised Code of Washington (RCW), Washington Administrative Code (WAC) and *Puget Sound Water Quality Management Plan* (PSMP).

GMA Document	Issue of Concern	Recommendation
Comprehensive Plan	UGA Boundaries	Avoid expansion of UGA boundaries into areas where urbanization may have a significant adverse impact on critical natural resources, shellfish growing areas, habitat areas, flood hazard and aquifer recharge areas. If avoidance is not possible, then require mitigation through special regulations, such as requirements for open space, lower densities, forest retention, minimizing impervious surface areas and use of other low impact development techniques. Plan for future development with urban levels of stormwater standards in UGAs outside of incorporated areas. When reducing the size of a UGA, do so first in areas where a UGA drains to a shellfish growing area or other critical habitat area. (PSMP SW-1.1)
Comprehensive Plan	Limited Areas of More Intense Rural Development, or LAMIRDs (Counties only)	LAMIRDs allow infill development at higher densities than other rural areas. Recommended policies address managing the urban-type drainage and water quality problems of these special rural areas. Policies should require a higher level of stormwater planning and management in these areas, and promote low impact development as infill occurs. Policies should encourage clustering provisions, limiting impervious surfaces, protecting existing forest cover, and encouraging practices such as bioretention, soil amendment, and pervious pavement (PSMP SW-1.2.i)

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Comprehensive Plan	Stormwater	The stormwater program of the *Puget Sound Water Quality Management Plan* http://www.psat.wa.gov/Publications/manplan00/mp_index.htm is adopted by the state as the goal for all Puget Sound jurisdictions. The comprehensive program provides guidance for protection of public and private property and sensitive natural areas from the adverse effects of stormwater runoff. PSAT recommends that the Comprehensive Plan include a policy to adopt stormwater program elements, including adoption of the 2005 Ecology *Stormwater Management Manual for Western Washington* or an equivalent manual. • Stormwater controls for new development and redevelopment. • Site plan review • Inspection of construction sites • Maintenance of permanent facilities • Source control • Illicit discharges and water quality response • Identification and ranking of problems • Public education and involvement • Low impact development practices • Watershed or basin planning • Local funding capacity • Monitoring program • Schedule for implementation Recommend adopting policies to encourage, promote or require low impact development stormwater practices for new development and re-development.
Comprehensive Plan	Subarea Plans	Subarea boundaries should be aligned with sub-basin boundaries, so that subarea plans are developed around a functioning watershed. A model is Kitsap County's Planning by Watershed process and Chico Creek pilot project (see http://www.psat.wa.gov/Programs/growth/LID_futures.htm)with additional information at http://www.kitsapgov.com/nr/nr/planningbywatershed.htm

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Comprehensive Plan	Clearing and grading ordinance	Policy to adopt a clearing and grading ordinance, if jurisdiction does not have one. Refer to *Low Impact Development Technical Guidance Manual for Puget Sound* at http://www.psat.wa.gov/Programs/LID.htm for information on incorporating low impact development clearing and grading practices.
Comprehensive Plan	Resource Lands - Designating shellfish beds as agricultural lands of long-term commercial significance	The GMA under RCW 36.70A.030 (2) provides the latitude to designate aquaculture resource lands, including commercial shellfish tidelands and their upland facilities as lands of "long-term commercial significance for agricultural production." As with critical areas, the comprehensive plan and development regulations should be structured to protect the values, functions and continued use of shellfish beds while prohibiting incompatible, adjacent land uses. Policies can allow accessory uses such as shellfish processing facilities. Jefferson and Thurston counties have done this. WAC 365-190-050
Comprehensive Plan	Critical Areas policies	Policies should include: Including Best Available Science: A GMA amendment in 1995 required that jurisdictions include Best Available Science "with special attention to conservation or protection measures necessary to preserve or enhance anadromous fisheries…." RCW 36.70A172(1). See the citations list and other references under the critical areas section of the Comprehensive Plan above. Fish and Wildlife Habitat Conservation Areas: • Designation of nearshore resources including kelp and eelgrass beds, herring, surf smelt, and sand lance spawning areas as critical areas. WAC 365-190-080(5)(a)(iv) • Designation of commercial and recreational shellfish growing areas as critical areas is also recommended. WAC 365-190-080 (5) (a)(iii) • Policies for forage fish protection should include identification and regulation of feeder bluffs that provide sediment that maintains the beach habitat on which these species rely. This may include measures such as setbacks, marine riparian buffers, and restrictions on bulkheads. • Designation of pocket estuaries and shallow, nearshore areas that connect them and function as salmon migration corridors. Pocket estuaries range from the mouths of

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		small streams and creeks to nearly enclosed bays, and can be composed of habitats such as unvegetated flats, salt marsh and tidal channels. This feature occurs irregularly along the protected and exposed shorelines that dominate most of Puget Sound. The processes that create and maintain pocket estuaries are complex and a combination of watershed, land, marine, and littoral processes. See information on protecting nearshore habitat for salmon recovery at http://www.psat.wa.gov/Publications/salmon_recovery/index.htm • Adoption of the *StormwaterManagement Manual for Western Washington*, (Ecology, 2005), especially Volume I, the minimum requirements. The minimum requirements include the flow control duration standard and the treatment standard. Ecology's 2001 manual is referenced in CTED's *Citations of Recommended Sources of Best Available Science for Designating and Protecting Critical Areas* (CTED, March 2002) for water quality and habitat. References for data and to identify critical areas for designation: • PSAT packet with multiple links to agency data http://www.psat.wa.gov/Programs/GMA/GMA.htm • Ecology's Digital Coastal Atlas http://www.ecy.wa.gov/programs/sea/SMA/atlas_home.html • Resources to protect shellfish through critical areas or natural resource lands designations http://www.psat.wa.gov/Programs/shellfish/Resources_CAO_03.pdf • CTED's Technical Reports include Best Available Science Citations and a Critical Areas Handbook in pdf files that can be downloaded at http://cted.wa.gov/DesktopDefault.aspx?tabid=488&tabindex=61 • Forage fish data for north Puget Sound is available from the Northwest Straits Initiative website at http://www.nwstraits.org/ • Science and guidance for designating and protecting nearshore resources: http://www.psat.wa.gov/Publications/salmon_recovery/index.htm • Marine and estuarine Aquatic Habitat Guidelines white papers:

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		http://www.wdfw.wa.gov/hab/ahg/ahgwhite.htm • Dept of Fish and Wildlife Priority Habitat and Species: http://wdfw.wa.gov/hab/phspage.htm Wetlands and flood hazard areas: Policies to manage stormwater effectively, including encouraging low impact development measures in contributing areas of the watershed to retain or detain runoff at the site as allowed by individual site conditions, in particular the protection of native forested and prairie vegetation and soils. WAC 365-190-080(1) and (3c) • References: Ecology's *Best Available Science for Freshwater Wetlands* is available at http://www.ecy.wa.gov/programs/sea/bas_wetlands/index.html • For information on Marine and Estuarine wetlands see the Dept of Fish and Wildlife's Aquatic Habitat Guidelines white papers: http://wdfw.wa.gov/hab/ahg/marnrsrc.htm Geologic hazard areas: Protection of public safety and public and private property from hazards due to steep slopes should include both on-site and off-site drainage and stormwater assessment and management. WAC 365-190-080(4)(d) Aquifer recharge areas: Policies to encourage low impact development for stormwater management that promote infiltration of treated stormwater to protect groundwater quality. See WAC 365-190-080 (4c) regarding protection of groundwater quality.
Growth Management Ordinances and Regulations		
Critical Areas Ordinance	Fish and Wildlife Habitat Areas	• Designate marine riparian areas and nearshore habitats (surf smelt and sand lance spawning areas, eelgrass and kelp beds) as critical fish and wildlife habitat areas. WAC 365-190-080(5)(a)(iv) • Designate feeder bluffs not only as geologically hazardous (eroding, slide-prone) bluffs, but also as areas critical for maintaining forage fish spawning habitat where sediment from the feeder bluffs nourishes such habitat.

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		• Designate pocket estuaries and shallow, marine shorelines that connect them as habitat critical to several life history stages of juvenile Chinook or juvenile chum salmon. Pocket estuaries range from the mouths of small streams and creeks to nearly enclosed bays, and can be composed of habitats such as unvegetated flats, salt marsh and tidal channels. This feature occurs irregularly along the protected and exposed shorelines that dominate most of Puget Sound. The processes that create and maintain pocket estuaries are complex and a combination of watershed, land, marine, and littoral processes. See information on protecting nearshore habitat for salmon recovery at http://www.psat.wa.gov/Publications/salmon_recovery/index.htm • Designate shellfish beds as critical fish and wildlife habitat areas. WAC 365-190-080 (5) (a)(iii) • Require consistency of habitat protection plans with recommendations in Washington Department of Fish and Wildlife (WDFW) Aquatic Habitat guidelines for fish and wildlife conservation areas, which can be found at: http://www.wa.gov/wdfw/hab/ahg/ and WDFW's Priority Habitat and Species at http://wdfw.wa.gov/hab/phspage.htm • PSAT nearshore habitat guidance for salmon recovery is available at: http://www.psat.wa.gov/Publications/salmon_recovery/index.htm • Stormwater management: *Citations of Recommended Sources of Best Available Science* (CTED, 2002) includes references in a section "Increased Impervious Surfaces and Stormwater" as well as in the "Water Quality and Habitat" section that are relevant for protection of aquatic habitat. Included among those references is the revised *Stormwater Management Manual for Western Washington* (Ecology, 2005). In addition to adopting the Ecology manual, PSAT recommends including provisions for areas that drain to critical fish and wildlife habitat that limit and disconnect impervious surfaces, retain native forest cover and encourage or require the use of low impact development stormwater management techniques to treat and infiltrate stormwater on site. See *Low Impact Development Technical Guidance Manual for Puget Sound* at http://www.psat.wa.gov/Publications/LID_tech_manual05/lid_index.htm

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	Frequently Flooded Areas	• Coordinate mitigation studies with local watershed and salmon recovery planning processes. (PSMP SW 1.2.j) • In areas that drain to flood hazard areas, manage stormwater and encourage low-impact development stormwater measures to prevent runoff contributions from new development and re-development. WAC 365-190-080(3c)
Critical Areas Ordinance	Wetlands	• Ecology's *Best Available Science for Freshwater Wetlands* is available at http://www.ecy.wa.gov/programs/sea/bas_wetlands/index.html • Revise wetland buffers to be consistent with the Department of Ecology publication "Wetland Buffers: Use and Effectiveness" Publication #92-10. • References and information for management of estuarine wetlands is found in the Department of Fish and Wildlife's Aquatic Habitat Guidelines white paper at http://wdfw.wa.gov/hab/ahg/marnrsrc.htm • Adopt mitigation policies for wetlands consistent with the state Alternative Mitigation Policy Guidance for Aquatic Permitting, found at: http://www.wa.gov/wdfw/hab/ahg/altmtgtn.pdf Adopt regulations for wetlands consistent with the guidance in the Marine and Freshwater Habitat program (addendum) of the *Puget Sound Water Quality Management Plan* at: http://www.wa.gov/puget_sound/Programs/Habitat.htm
Critical Areas Ordinance	Aquifer Recharge Areas	Include regulations to encourage or require low impact development stormwater measures that treat and infiltrate stormwater on site. See WAC 365-190-080 (4c) regarding protection of groundwater quality. Information on low impact development and the *Low Impact Development Guidance Manual for Puget Sound* can be found at http://www.psat.wa.gov/Publications/LID_tech_manual05/lid_index.htm
Critical Areas Ordinance	Geologic Hazard Areas	Provisions for protection of public safety and private and public property from hazards related to steep slopes should include drainage and stormwater management both on-site and off-site, depending on site conditions. WAC 365-190-080(4)(d)

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Stormwater Ordinance	Puget Sound stormwater program elements addressed in regulations	Include the following components of the Puget Sound comprehensive stormwater management program in regulations: • Stormwater controls for new development and redevelopment • Stormwater site plan review • Maintenance of permanent private facilities and public facilities subject to permit review. • Source control regulations • Provisions to allow, encourage or require low-impact development. See the *Low Impact Development Technical Guidance Manual for Puget Sound at* *http://www.psat.wa.gov/Publications/LID_tech_manual05/lid_index.htm* • Special regulations for a watershed or sub-basin based on recommendations of watershed or salmon recovery plans, water cleanup plans or shellfish protection plans. (PSMP SW-1.2)
Stormwater Ordinance	Adoption of Ecology's 2005 *Stormwater Management Manual for Western Washington*	Recommend adoption of the Ecology manual or a technically equivalent manual. The regulations for new development and redevelopment, site plan review, maintenance of private and public facilities that are permitted through the stormwater ordinance, as well as some source controls are included in the Ecology manual. Adoption of the manual and its thresholds for review accomplishes those elements of stormwater management. (PSMP SW-1.2.a)
Stormwater Ordinance	Low impact development	While the Ecology manual currently includes some guidance, best management practices and limited credits for low impact development, an LID credit committee will continue to evaluate research and recommend expanded credits for LID practices. Jurisdictions should develop new or revise existing regulations to allow for, encourage or require these measures. (PSMP SW 1.2.i) Refer to the *Low Impact Development Technical Guidance Manual for Puget* Sound on the PSAT website: http://www.psat.wa.gov/Publications/LID_tech_manual05/lid_index.htm Also refer to the City of Seattle's Natural Drainage Systems program as a model for local government implementation: http://www.ci.seattle.wa.us/util/NaturalSystems/default.htm.

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Agricultural Lands Ordinances	Shellfish beds as agricultural lands of long-term commercial significance.	Shellfish beds can be designated as agricultural lands of long-term commercial significance under RCW 36.70A.030(2). Recommendations for protection include prohibiting incompatible uses in or adjacent to the growing areas, especially activities that could result in pollution that would threaten water quality and human health. For example, a marina or sewer treatment plant are the most obvious examples, but others would include industrial activities with outfalls or runoff. Allow for accessory uses such as shellfish processing operations. (WAC 365-190-050) PSAT will provide further recommendations later in 2004 after completion of a project to develop land use guidelines for protection of shellfish growing areas.
Zoning Code Regulations	Low impact development	Provisions for review and acceptance of low impact development (LID) demonstration projects. (PSMP SW 1.2.j) For sample regulatory language for LID see http://www.psat.wa.gov/Programs/LID/LID_ordinances.htm Refer to the *Low Impact Development Technical Guidance Manual for Puget Sound* at http://www.psat.wa.gov/Publications/LID_tech_manual05/lid_index.htm Provisions for use of LID techniques to treat and infiltrate stormwater close to the source of origin in multiple, small-scale stormwater facilities rather than collecting and conveying it to a centralized treatment facility. Restrictions on allowable impervious surface area and removal of forest cover. Provisions for disconnecting the impervious surface area. Many jurisdictions limit the percentage of parcel coverage by impervious surface in the development regulations.
Zoning Code Regulations	LAMIRDS	For counties, higher level stormwater protections and incentives for low impact stormwater measures are recommended in limited areas of more intensive rural development (LAMIRDS) where urban-type levels of impervious surface and land uses occur in greater density than most rural areas. Low impact development can provide cost-effective stormwater management alternatives for new development and redevelopment. (PSMP SW 1.2.i)
Zoning Code Regulations	High priority watersheds for habitat and water quality	Recommend higher levels of stormwater protection and incentives for low impact development in sensitive, high-priority watersheds. (PSMP SW 1.2.j)

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Zoning Code Regulations	Residential subdivisions and multi-family units	Include language to allow clustering to retain natural areas and vegetation/land cover, and use of low impact development (LID) techniques, such as bioretention, soil amendments, permeable pavement, etc. to manage stormwater.
Zoning Code Regulations	Commercial, retail and municipal buildings	Promote incorporation of LID techniques, such as bioretention and amended soils, into parking lot islands. Encourage use of permeable pavement. Encourage rainwater catchment systems and use of the water to irrigate landscaping and flush toilets.
Zoning Code Regulations	Parking requirements	The PSAT low impact development (LID) web page, which has Portland's very innovative parking regulations, provides an excellent example of designs and policies, including incentives. The regulations reduce the number of parking spaces required, the size of parking lot access lanes, and the size of parking spaces in order to reduce overall imperviousness of a site. See *Stormwater related amendments to the Zoning Code* at http://www.psat.wa.gov/Programs/LID/LID_ordinances.htm and other examples of ordinances.
Zoning Code Regulations	Smart Growth in urban growth areas	Promote liveable urban communities using techniques such as allowing mixed land uses, accessory dwelling units, pedestrian-friendly neighborhood design, multi-modal transportation, clustering for preservation of green space, and other measures. Links to more information are on PSAT website at http://www.psat.wa.gov/Programs/Smartgrowth.htm
Health Code (or Sanitary Sewage Code)	Protection of sensitive areas such as shellfish growing areas.	Provide for higher levels of periodic inspection and maintenance of all systems. Refer to PSAT fact sheet *Stronger Safeguards for Shellfish Beds* section on On-site Sewage Management: http://www.psat.wa.gov/Programs/shellfish/Shell_quality.htm#land Also refer to the *Puget Sound Water Quality Management Plan* element for On-site Sewage with local program recommendations outlined in OS-2: http://www.psat.wa.gov/Publications/manplan00/mp_index.htm